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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,576	12/12/2003	Gregory Robin Price	TRMB1471	2547

70409 7590 02/02/2009

TRIMBLE NAVIGATION LIMITED C/O WAGNER BLECHER
123 WESTRIDGE DRIVE
WATSONVILLE, CA 95076

EXAMINER	
TRAN, DALENA	
ART UNIT	PAPER NUMBER
3664	
MAIL DATE	DELIVERY MODE
02/02/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/735,576	PRICE ET AL.	
	Examiner	Art Unit	
	Dalena Tran	3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-7,10-14,16-19,23-25,28-30 and 32-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7,10-14,16-19,23-25,28-30 and 32-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10735576	12/12/03	PRICE ET AL.	TRMB1471

TRIMBLE NAVIGATION LIMITED C/O WAGNER BLECHER
123 WESTRIDGE DRIVE
WATSONVILLE, CA 95076

EXAMINER	
Dalena Tran	
ART UNIT	**PAPER**
3664	20090201

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

DETAILED ACTION

Notice to Applicant(s)

1. This office action is responsive to the amendment filed on 11/17/08. As per request, claims 1, 10, 12, and 25 have been amended; Claims 4, 8-9, 15, 20-22, 26-27, and 31 have been cancelled. Thus, claims 1-3, 5-7, 10-14, 16-19, 23-25, 28-30, and 32-35 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 5-7, 10-14, 16-19, and 23-24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvili (5,717,593), in view of Fowler et al. (6,104,979), McClure et al. (6,539,303), Murphy (6,711,475), and Weindorf (6762741).

As per claim 1, Gvili discloses an integrated guidance system comprising: a position determination system adapted for determining a current position (see at least column 5, lines 10-25), a lightbar device adapted for providing a visual representation of a deviation of current position from a desired path to guide movement along desired path (see at least columns 5-6, lines 40-56; and column 8, lines 1-57), and a processor adapted for facilitating user interaction by integrating operation of position determination system, lightbar device, data input device, and display device (see at least column 7, lines 29-67; and column 8, lines 18-57). Gvili does not explicitly disclose a display device for displaying text and graphics. However, Gvili discloses a system capable of displaying text and graphics, because Gvili discloses a map display (see at

least column 7, line 49-52), and alphanumeric data (see at least column 7, lines 54-57), and the indicator of alphanumeric capability, such as necessary to post the control prompt in text (see column 7, lines 10-13).

In addition, to modify for the teach of Gvili, Fowler et al. disclose a display device for displaying graphics (see at least the abstract; and columns 3-4, lines 66-30). Also, a text display is well known as teach by Murphy (see column 7, lines 1-55). Gvili discloses a data input device for selecting (see at least column 4, lines 10-17; column 6, lines 53-56; and column 7, lines 29-37). Gvili does not explicitly disclose a scrolling, and editing operations. However, Gvili discloses a control panel (72) in figure 1, has switch and arrow keys, enable for the pilot to make a selection (see column 6, lines 53-56). It would have been obvious to one of ordinary skill in the art that, the control panel (72) represent a mechanical input device capable of performing a scrolling, and editing operations through the arrow keys and select keys. Furthermore, to modify for the teach of Gvili, McClure et al. disclose a data input device for scrolling operations (see at least column 5, lines 46-47; and column 4, lines 20-28). In addition, also to modify for the teach of Gvili, Murphy discloses a data input device for editing operations (see at least columns 7-8, lines 1-45), including configuring position determining system with a menu, and display menu (see column 4, lines 42-54; and column 5, lines 31-56).

Furthermore, in claim 1, Gvili do not disclose a housing enclosing position determination system, lightbar device, data input device, display device, and processor. However, McClure et al. ('303) disclose a navigation guidance system to guide a vehicle to a desired path (see the abstract), and a housing enclosing position determination system, lightbar device, data input device, display device, and processor (see at least column 4, lines 20-38). Also, McClure et al.

disclose the components of the system maybe incorporated into a single unit or maybe a separate module (column 4, lines 30-35), when a component as a separate unit, it would be connected to the controller by a cable (see '303, column 4, line 37). It is well known in the art that when the system components are integrated into one single unit, the components are interconnected in signals communication with a serial communication bus and a controller, and one of ordinary skill in the art would understand that the cables connection will be eliminated, and instead a communication bus would allows a central controller to maintain control over all of the system components and regulate the signal traffic on the serial bus. Also, eliminate the use of cables connection, will have the benefit of reducing congestion in a small cockpit of a vehicle such as an aircraft.

In addition, in claim 1, McClure et al. also disclose a differential global position determination system adapted for using a differential correction process to correct errors, wherein a differential correction maybe stored in an electronic file and accessed later or may be applied in real time (see the abstract; column 4, lines 47-65; and columns 6-7, lines 5-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining a display device for displaying text and graphics for easily viewing and interacting by the user for providing navigation guidance; also, it would have been obvious to one of ordinary skill in the art to combine a data input device include scrolling, editing operations, configuring position determining system with a menu, and display menu so the user can manual select a desired parameter in a display screen with variety of different option selecting and editing data; and it would have been obvious to one of ordinary skill in the art by incorporated system components into a single unit enclosing into a housing for interconnecting

and regulating the signals of relating system components, and to avoid overcrowd of obstacles such as too many cables connect in a space constraint of a cockpit vehicle. Furthermore, the less of an obstacle blocking any portion of a cockpit space, the quicker and closer a pilot will be able to acquire and maintain the desired courseline across a desired path, therefore, the safer the mission can be conducted; also, it would have been obvious to one of ordinary skill in the art to combine a differential global position determination system for steering correction the vehicle current track error or distance from the desired path.

Furthermore, in claim 1, Gvili does not disclose display adapted to be viewable under various light condition. However, Weindorf discloses text, menu, and graphics adapted to be viewable under various light conditions, wherein an operator is able to vary the contrast and brightness of text, menu, and graphics by using buttons to interact with a user interface of integrated guidance system (see columns 1-2, lines 30-20; column 3, lines 38-50; columns 5-6, lines 3-18; columns 6-7, lines 53-46; columns 9-10, lines 45-56; and column 15, lines 1-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining display adapted to be viewable under various light condition enabling a user to adjust the display device in a manner to suit one or more viewing preferences.

In addition, Gvili does not disclose the housing has a wing shaped portion. However, McClure et al. disclose an integrated guidance system with a square shaped (figure 2). It would have been well known, and it would have been obvious to one of ordinary skill in the art that one can design a housing enclosing a guidance system with many different shapes such as a T shaped, a L shaped, a wing or fan shaped, or a S shaped, it just a design choice, because depend on how electrical components inside is layout, a housing need to design a shape that can enclose the

whole system components. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining different shaped of a housing enclosing an integrated guidance system depend on how the electrical link between various components inside the housing, in order to protect the electrical components, and therefore, the electrical connector or cable connector, and circuit board component will not vibrate or disengage relative to each other, in order to assist positioning of components, so as to enhance stability.

In addition to claim 1, Gvili does not explicitly disclose data input device comprises a first, second, and third button. However, Gvili discloses a data input device, and control panel (see at least figure 1, item 72, this control panel have a plurality of buttons. Furthermore, it is well known in the art that data input device include plurality of buttons, enable user select different function in the control panel, for example, Fowler et al. disclose data input device comprises a first, second, and third button, wherein first, second, and third buttons facilitate interacting with a plurality of available functions displayed on display device (see at least column 3, lines 40-60; and column 5, lines 8-10). In addition, McClure et al. disclose first button, second button, and third button of data input device are positioned on a top surface of housing for convenient access by an operator of integrated guidance system, and wherein first button is larger than second button and third button to reduce the need for visual assistance by operator to distinguish first button, second button, and third button (see figure 2, input switch include a menu switch 12, an enter or execute switch 14, a decrement or down switch 16, and increment or up switch 18, a contour mode switch 20, a parallel mode switch 22, and a stop guidance switch 24; in figure 2, the contour switch 20 is larger than the menu switch 12, and enter or execute switch14, the stop

guidance switch 24 have a different size and shape, and larger than the menu switch 12; all these switch are positioned on a top surface of housing). Also, Murphy discloses data input device comprises a first, second, and third button, wherein first, second, and third buttons facilitate interacting with a plurality of available functions displayed on display device (see at least column 7, line 60). Also, Weindorf discloses the user interface is one or more knobs or push buttons and position in different place (see column 6, lines 8-18). Therefore, it would have been obvious to one of ordinary skill in the art that, the data input devices included plurality of buttons, and depend on a design choice, the data input device can positioned in the top surface of housing, in order to easy access by the user and allow the user moves from one menu display to another by actuating the appropriate switch or button on control interface; also, different shape and size of the buttons or switches can be designed, in order for the user to easy to understand and to master in identify a select function. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining data input device comprises a first, second, and third button for selecting different available option in the display device; the data input device can positioned in the top surface of housing, and different size of buttons provides the vehicle driver with a view of the instrument panel, and the interface is conveniently within the driver's vision during glance at the instrument panel.

As per claims 2-3, Gvili discloses position determination system comprises a GPS antenna and a GPS receiver, GPS antenna is positioned externally and separately relative to GPS receiver (see at least column 5, lines 10-25).

As per claims 5-6, Gvili discloses lightbar device comprises a plurality of lights that are adapted to emit a light pattern that indicates deviation, wherein plurality of lights are spaced

apart and are aligned in a row, and wherein light pattern is formed by selectively illuminating particular ones of plurality of lights (see at least column 8, lines 1-57).

As per claim 7, Gvili discloses plurality of lights comprises a plurality of LED's (see at least column 5, lines 26-40).

As per claim 10, Fowler et al. discloses display device displays available functions in a menu driven manner that is user friendly (see at least column 3, lines 20-40).

As per claim 12, Gvili discloses an integrated guidance system comprising: a position determination system adapted for determining a current position (see at least column 5, lines 10-25), and a lightbar device adapted for providing a visual representation of a deviation of current position from a desired path to guide movement along desired path (see at least columns 5-6, lines 40-56; and column 8, lines 1-57). Gvili does not explicitly disclose a display device for displaying text and graphics. However, Gvili discloses a system capable of displaying text and graphics, because Gvili discloses a map display (see at least column 7, line 49-52), and alphanumeric data (see at least column 7, lines 54-57), and the indicator of alphanumeric capability, such as necessary to post the control prompt in text (see column 7, lines 10-13). In addition, to modify for the teach of Gvili, Fowler et al. disclose a display device for displaying graphics (see at least the abstract; and columns 3-4, lines 66-30). Also, a text display is well known as teach by Murphy (see column 7, lines 1-55).

Gvili discloses a data input device for selecting (see at least column 4, lines 10-17; column 6, lines 53-56; and column 7, lines 29-37). Gvili does not explicitly disclose a scrolling, and editing operations. However, Gvili discloses a control panel (72) in figure 1, has switch and arrow keys, enable for the pilot to make a selection (see column 6, lines 53-56). It would have

been obvious to one of ordinary skill in the art that, the control panel (72) represent a mechanical input device capable of performing a scrolling, and editing operations through the arrow keys and select keys.

Furthermore, to modify for the teach of Gvili, McClure et al. disclose a data input device for scrolling operations (see at least column 5, lines 46-47; and column 4, lines 20-28). In addition, also to modify for the teach of Gvili, Murphy discloses a data input device for editing operations (see at least columns 7-8, lines 1-45), including configuring position determining system with a menu, and display menu (see column 4, lines 42-54; and column 5, lines 31-56).

Furthermore, in claim 12, Gvili do not disclose a housing enclosing position determination system, lightbar device, data input device, and display device. However, McClure et al. ('303) disclose a navigation guidance system to guide a vehicle to a desired path (see the abstract), and a housing enclosing position determination system, lightbar device, data input device, display device (see at least column 4, lines 20-38). Also, McClure et al. disclose the components of the system maybe incorporated into a single unit or maybe a separate module (column 4, lines 30-35), when a component as a separate unit, it would be connected to the controller by a cable (see '303, column 4, line 37). It is well known in the art that when the system components are integrated into one single unit, the components are interconnected in signals communication with a serial communication bus and a controller, and one of ordinary skill in the art would understand that the cables connection will be eliminated, and instead a communication bus would allows a central controller to maintain control over all of the system components and regulate the signal traffic on the serial bus. Also, eliminate the use of cables connection, will have the benefit of reducing congestion in a small cockpit of a vehicle such as an aircraft.

In addition, in claim 12, McClure et al. also disclose a differential global position determination system adapted for using a differential correction process to correct errors, wherein a differential correction maybe stored in an electronic file and accessed later or may be applied in real time (see the abstract; column 4, lines 47-65; and columns 6-7, lines 5-11). Furthermore, in claim 12, Gvili does not disclose display adapted to be viewable under various light condition. However, Weindorf discloses text, menu, and graphics adapted to be viewable under various light conditions, wherein an operator is able to vary the contrast and brightness of text, menu, and graphics by using buttons to interact with a user interface of integrated guidance system (see columns 1-2, lines 30-20; column 3, lines 38-50; columns 5-6, lines 3-18; columns 6-7, lines 53-46; columns 9-10, lines 45-56; and column 15, lines 1-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining a differential global position determination system for steering correction the vehicle current track error or distance from the desired path; and also, it would have been obvious to combine a display adapted to be viewable under various light condition enabling a user to adjust the display device in a manner to suit one or more viewing preferences.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining a display device for displaying text and graphics for easily viewing and interacting by the user for providing navigation guidance; also, it would have been obvious to one of ordinary skill in the art to combine a data input device include scrolling, editing operations, and configuring position determining system with a menu, and display menu so the user can manual select a desired parameter in a display screen with variety of different option selecting and editing data; and it would have been obvious to one of ordinary skill in the

art by incorporated system components into a single unit enclosing into a housing for interconnecting and regulating the signals of relating system components, and to avoid overcrowd of obstacles such as too many cables connect in a space constraint of a cockpit vehicle. Furthermore, the less of an obstacle blocking any portion of a cockpit space, the quicker and closer a pilot will be able to acquire and maintain the desired courseline across a desired path, therefore, the safer the mission can be conducted.

In addition, Gvili does not disclose the housing has a wing shaped portion. However, McClure et al. disclose an integrated guidance system with a square shaped (figure 2). It would have been well known, and it would have been obvious to one of ordinary skill in the art that one can design a housing enclosing a guidance system with many different shapes such as a T shaped, a L shaped, a wing or fan shaped, or a S shaped, it just a design choice, because depend on how electrical components inside is layout, a housing need to design a shape that can enclose the whole system components. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining different shaped of a housing enclosing an integrated guidance system depend on how the electrical link between various components inside the housing, in order to protect the electrical components, and therefore, the electrical connector or cable connector, and circuit board component will not vibrate or disengage relative to each other, in order to assist positioning of components, so as to enhance stability.

In addition to claim 12, Gvili does not explicitly disclose data input device comprises a first, second, and third button. However, Gvili discloses a data input device, and control panel (see at least figure 1, item 72, this control panel have a plurality of buttons. Furthermore, it is well

known in the art that data input device include plurality of buttons, enable user select different function in the control panel, for example, Fowler et al. disclose data input device comprises a first, second, and third button, wherein first, second, and third buttons facilitate interacting with a plurality of available functions displayed on display device (see at least column 3, lines 40-60; and column 5, lines 8-10). In addition, McClure et al. disclose first button, second button, and third button of data input device are positioned on a top surface of housing for convenient access by an operator of integrated guidance system, and wherein first button is larger than second button and third button to reduce the need for visual assistance by operator to distinguish first button, second button, and third button (see figure 2, input switch include a menu switch 12, an enter or execute switch 14, a decrement or down switch 16, and increment or up switch 18, a contour mode switch 20, a parallel mode switch 22, and a stop guidance switch 24; in figure 2, the contour switch 20 is larger than the menu switch 12, and enter or execute switch14, the stop guidance switch 24 have a different size and shape, and larger than the menu switch 12; all these switch are positioned on a top surface of housing). Also, Murphy discloses data input device comprises a first, second, and third button, wherein first, second, and third buttons facilitate interacting with a plurality of available functions displayed on display device (see at least column 7, line 60). Also, Weindorf discloses the user interface is one or more knobs or push buttons and position in different place (see column 6, lines 8-18). Therefore, it would have been obvious to one of ordinary skill in the art that, the data input devices included plurality of buttons, and depend on a design choice, the data input device can positioned in the top surface of housing, in order to easy access by the user and allow the user moves from one menu display to another by actuating the appropriate switch or button on control interface; also, different shape

and size of the buttons or switches can be designed, in order for the user to easy to understand and to master in identify a select function. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining data input device comprises a first, second, and third button for selecting different available option in the display device; the data input device can positioned in the top surface of housing, and different size of buttons provides the vehicle driver with a view of the instrument panel, and the interface is conveniently within the driver's vision during glance at the instrument panel.

As per claims 13-14, Gvili discloses position determination system comprises a GPS antenna and a GPS receiver, GPS antenna is positioned externally and separately relative to GPS receiver (see at least column 5, lines 10-25).

As per claims 16-17, Gvili discloses lightbar device comprises a plurality of lights that are adapted to emit a light pattern that indicates deviation, wherein plurality of lights are spaced apart and are aligned in a row, and wherein light pattern is formed by selectively illuminating particular ones of plurality of lights (see at least column 8, lines 1-57).

As per claim 18, Gvili discloses plurality of lights comprises a plurality of LED's (see at least column 5, lines 26-40).

As per claim 19, Fowler et al. discloses user interface system comprises a processor, and processor executable instructions for implementing a user interface (see at least columns 2-3, lines 49-19).

As per claim 23, Fowler et al. discloses display device displays available functions in a menu driven manner that is user friendly (see at least column 3, lines 20-60).

As per claims 11, and 24, Gvili does not disclose LCD. However, McClure et al. disclose display device comprises a LCD (see at least column 5, lines 21-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining display device comprises a LCD for displaying integrated guidance system.

4. Claims 25, and 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fowler et al. (6,104,979) in view of McClure et al. (6,539,303), Murphy (6,711,475), and Weindorf (6762741).

As per claim 25, Fowler et al. disclose a method of interacting with a guidance system, method comprising: displaying on a display device of guidance system a plurality of available functions in a menu-driven manner that is user friendly, wherein display device display is adapted for displaying graphics (see at least the abstract; and columns 3-4, lines 66-30); and providing guidance system a data input device adapted for accessing and interacting with any one of available functions with a minimum number of inputs, and with minimum use of inputs (see at least column 3, lines 40-60), data input device enables selecting operations (see at least the abstract; column 1, lines 49-55; and columns 3-4, lines 50-30). Fowler et al. do not disclose a text display. However, Murphy discloses a text display (see column 7, lines 1-55). Fowler et al. also do not disclose a data input device for scrolling, and editing operations. However, McClure et al. disclose a data input device for scrolling operations (see at least column 4, lines 20-28; and column 5, lines 46-47). Also, Murphy discloses a data input device for editing operations (see at least columns 7-8, lines 1-59), including configuring position determining system with a menu, and display menu (see column 4, lines 19-37; and column 5, lines 35-56).

Furthermore, in claim 25, Fowler et al. do not disclose a housing enclosing data input device, guidance system, and display device. However, McClure et al. ('303) disclose a navigation guidance system to guide a vehicle to a desired path (see the abstract), and a housing enclosing data input device, guidance system, and display device (see at least column 4, lines 20-38). Also, McClure et al. disclose the components of the system maybe incorporated into a single unit or maybe a separate module (column 4, lines 30-35), when a component as a separate unit, it would be connected to the controller by a cable (see '303, column 4, line 37). It is well known in the art that when the system components are integrated into one single unit, the components are interconnected in signals communication with a serial communication bus and a controller, and one of ordinary skill in the art would understand that the cables connection will be eliminated, and instead, a communication bus would allows a central controller to maintain control over all of the system components and regulate the signal traffic on the serial bus. Also, eliminate the use of cables connection, will have the benefit of reducing congestion in a small cockpit of a vehicle such as an aircraft.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Fowler et al. by combining a display device for displaying text and graphics for easily viewing and interacting by the user for providing navigation guidance; also, it would have been obvious to one of ordinary skill in the art to combine a data input device include scrolling, editing operations, and configuring position determining system with a menu, and display menu so the user can manual select a desired parameter in a display screen with variety of different option selecting and editing d; and it would have been obvious to one of ordinary skill in the art that by incorporated system components into a single unit enclosing into

a housing for interconnecting and regulating the signals of relating system components, and to avoid overcrowd of obstacles such as too many cables connect in a space constraint of a cockpit vehicle. Furthermore, the less of an obstacle blocking any portion of a cockpit space, the quicker and closer a pilot will be able to acquire and maintain the desired course line across a desired path, therefore, the safer the mission can be conducted.

In addition, Fowler et al. do not disclose display adapted to be viewable under various light condition. However, Weindorf discloses text, menu, and graphics adapted to be viewable under various light conditions, wherein an operator is able to vary the contrast and brightness of text, menu, and graphics by using buttons to interact with a user interface of integrated guidance system (see columns 1-2, lines 30-20; column 3, lines 38-50; columns 5-6, lines 3-18; columns 6-7, lines 53-46; columns 9-10, lines 45-56; and column 15, lines 1-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Fowler et al. by combining a display adapted to be viewable under various light condition enabling a user to adjust the display device in a manner to suit one or more viewing preferences.

In addition, Gvili does not disclose the housing has a wing shaped portion. However, McClure et al. disclose an integrated guidance system with a square shaped (figure 2). It would have been well known, and it would have been obvious to one of ordinary skill in the art that one can design a housing enclosing a guidance system with many different shapes such as a T shaped, a L shaped, a wing or fan shaped, or a S shaped, it just a design choice, because depend on how electrical components inside is layout, a housing need to design a shape that can enclose the whole system components. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Gvili by combining different shaped of a

housing enclosing an integrated guidance system depend on how the electrical link between various components inside the housing, in order to protect the electrical components, and therefore, the electrical connector or cable connector, and circuit board component will not vibrate or disengage relative to each other, in order to assist positioning of components, so as to enhance stability.

In addition to claim 25, Fowler et al. disclose data input device comprises a first, second, and third button, wherein first, second, and third buttons facilitate interacting with a plurality of available functions displayed on display device (see at least column 3, lines 40-60; and column 5, lines 8-10). Fowler et al. do not disclose size of the buttons. However, McClure et al. disclose first button, second button, and third button of data input device are positioned on a top surface of housing for convenient access by an operator of integrated guidance system, and wherein first button is larger than second button and third button to reduce the need for visual assistance by operator to distinguish first button, second button, and third button (see figure 2, input switch include a menu switch 12, an enter or execute switch 14, a decrement or down switch 16, and increment or up switch 18, a contour mode switch 20, a parallel mode switch 22, and a stop guidance switch 24; in figure 2, the contour switch 20 is larger than the menu switch 12, and enter or execute switch14, the stop guidance switch 24 have a different size and shape, and larger than the menu switch 12; all these switch are positioned on a top surface of housing). Also, Murphy discloses data input device comprises a first, second, and third button, wherein first, second, and third buttons facilitate interacting with a plurality of available functions displayed on display device (see at least column 7, line 60). Also, Weindorf discloses the user interface is one or more knobs or push buttons and position in different place (see column 6,

lines 8-18). Therefore, it would have been obvious to one of ordinary skill in the art that, the data input devices included plurality of buttons, and depend on a design choice, the data input device can positioned in the top surface of housing, in order to easy access by the user and allow the user moves from one menu display to another by actuating the appropriate switch or button on control interface; also, different shape and size of the buttons or switches can be designed, in order for the user to easy to understand and to master in identify a select function. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Fowler et al. by combining the data input device can positioned in the top surface of housing, and different size of buttons provides the vehicle driver with a view of the instrument panel, and the interface is conveniently within the driver's vision during glance at the instrument panel.

As per claim 35, Fowler et al. do not disclose LCD. However, McClure et al. disclose display device comprises a LCD (see at least column 5, lines 21-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Fowler et al. by combining display device comprises a LCD for displaying integrated guidance system.

5. Claims 28-30, and 32-34, are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Fowler et al. (6,104,979), McClure et al. (6,539,303), Murphy (6,711,475), and Weindorf (6762741) as applied to claim 25 above, and further in view of Gvili (5,717,593).

As per claim 28, Fowler et al. disclose an integrated guidance system comprising: a position determination system adapted for determining a current position (see at least column 3, lines 40-60). Fowler et al. do not disclose a lightbar device. However, Gvili discloses a lightbar

device adapted for providing a visual representation of a deviation of current position from a desired path to guide movement along desired path (see at least columns 5-6, lines 40-56; and column 8, lines 1-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Fowler et al. by combining a lightbar device for displaying a position and deviation from a guide path of the navigation system.

As per claims 29-30, Fowler et al. disclose GPS receiver (see at least column 3, lines 40-60). Fowler et al. do not disclose GPS antenna. However, Gvili discloses GPS antenna (see at least column 5, lines 10-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Fowler et al. by combining GPS antenna for accurately determine a position of the vehicle.

As per claims 32-33, Gvili discloses lightbar device comprises a plurality of lights that are adapted to emit a light pattern that indicates deviation, wherein plurality of lights are spaced apart and are aligned in a row, and wherein light pattern is formed by selectively illuminating particular ones of plurality of lights (see at least column 8, lines 1-57).

As per claim 34, Gvili discloses plurality of lights comprises a plurality of LED's (see at least column 5, lines 26-40).

Remarks

6. Applicant's arguments filed 11/17/08 have been fully considered but they are not persuasive.

All the references cited still read the new amended claims as above.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136 (a).

A shorten statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTHS shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136 (a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-W (in a first week of a bi-week), and T-R (in a second week of bi-week) from 7:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi H. Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dalena Tran/
Primary Examiner, Art Unit 3664
February 1, 2009